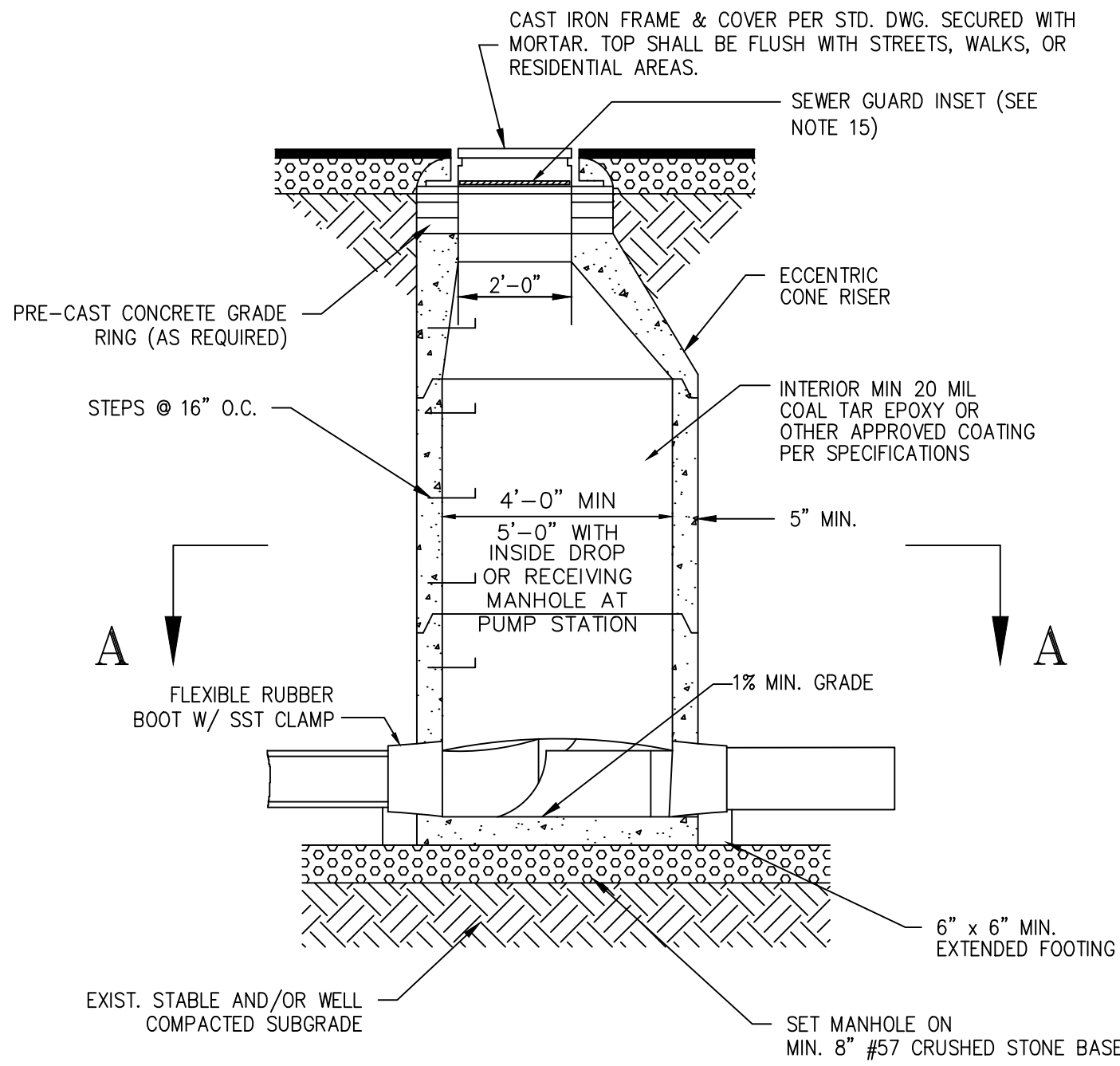
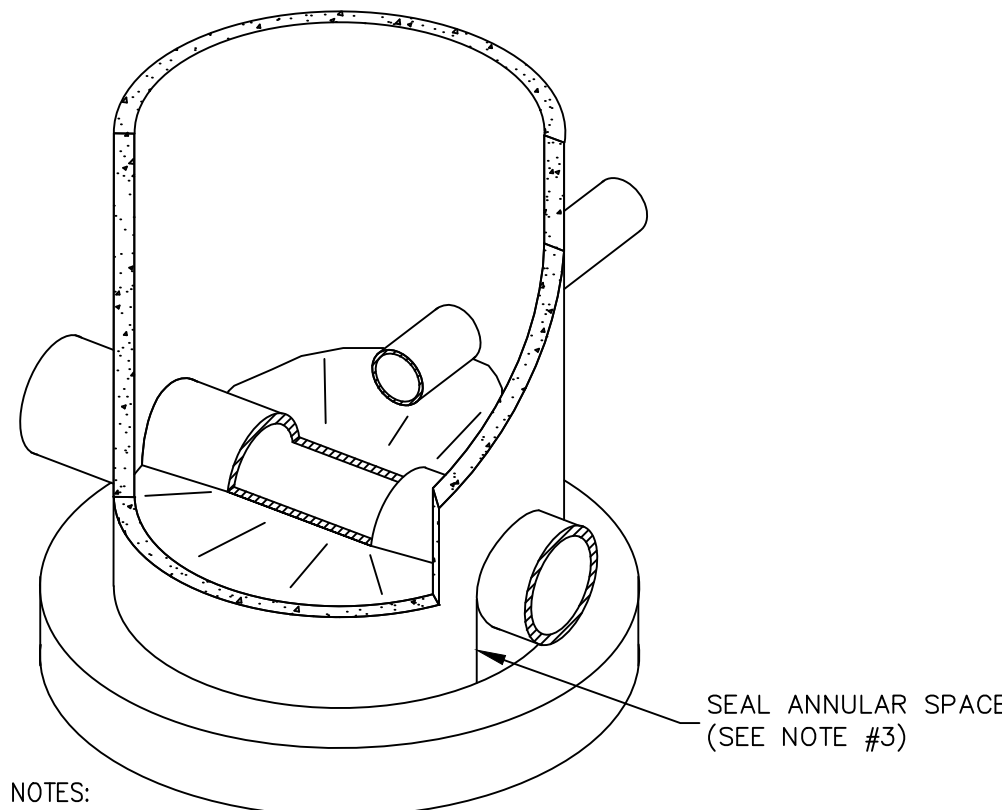
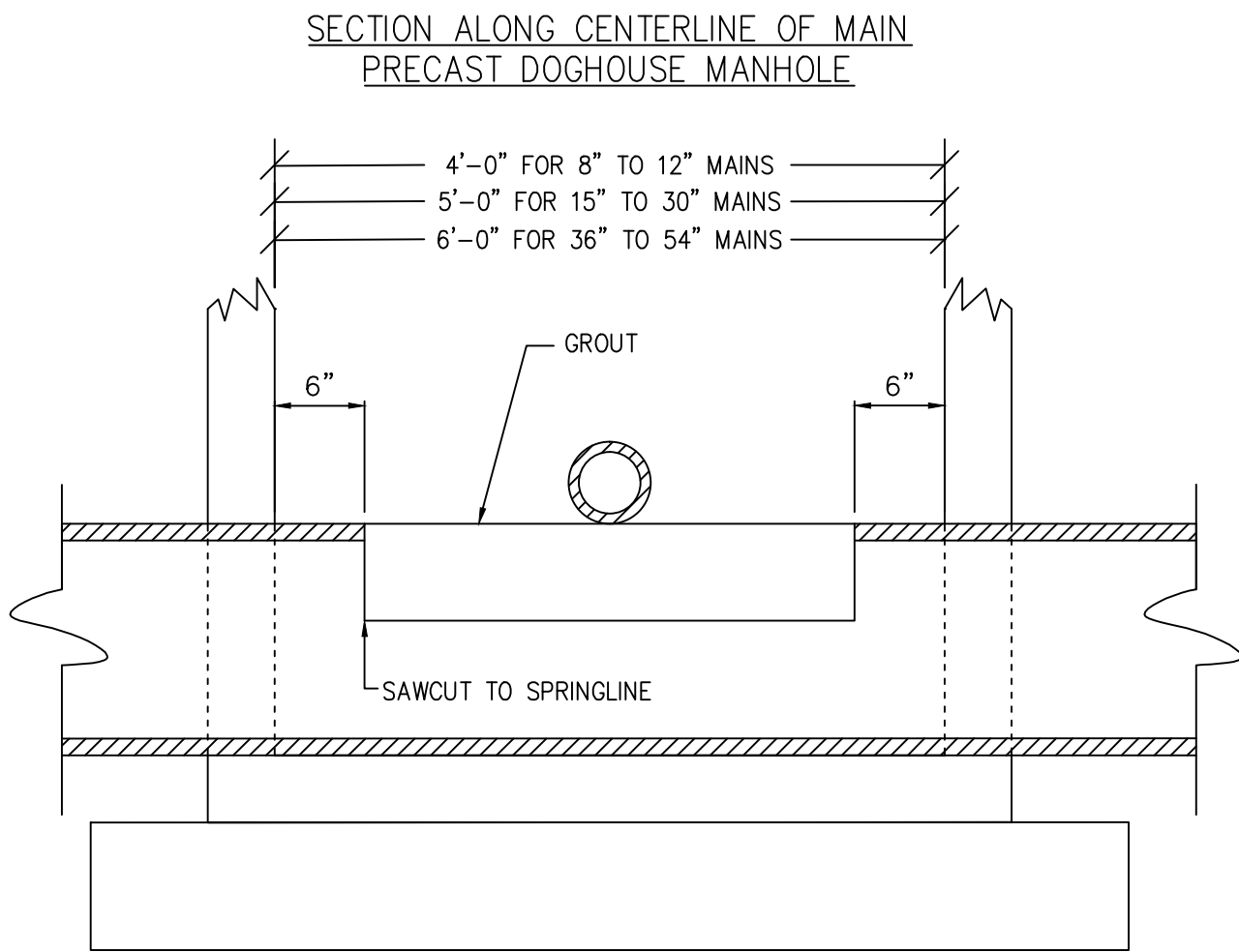


NOTES:

1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C 478. ALL SURFACES SHALL BE SMOOTH AND EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FIN, AND OTHER IMPERFECTIONS.
2. JOINTS BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT USING EITHER O-RING GASKETS CONFORMING WITH ASTM C 443 OR BUTYL RESIN CONFORMING WITH AASHTO M-198.
3. EXTERIOR JOINTS SHALL BE SEALED WITH A 4" WIDE BUTYL RUBBER WRAP.
4. ADD INTERIOR HIGH SOLIDS EPOXY PROTECTION COATING FOR ALL MANHOLES RECEIVING DISCHARGE FROM FORCE MAINS PER BRUNSWICK COUNTY TECHNICAL SPECIFICATIONS (MIN. 20 MILS).
5. HOLES FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CORED. DIAMETER OF HOLE SHALL NOT EXCEED OUTSIDE DIAMETER OR PIPE BY MORE THAN 3 INCHES.
6. CONNECTIONS OF PIPE TO MANHOLE SHALL BE MADE WATERTIGHT USING RESILIENT CONNECTORS CONFORMING TO ASTM C 923 OR NEOPRENE BOOTS EMBEDDED IN PRECAST BASE WITH STAINLESS STEEL COMPRESSION BANDS.
7. MANHOLE INVERTS SHALL BE INSTALLED USING BRICK AND MORTAR, OR MANHOLES MAY BE PRECAST, MONOLITHIC SECTIONS WITH FORMED INVERTS.
8. LIFT HOLES SHALL BE PLUGGED AND FILLED FLUSH WITH MORTAR.
9. ALL BRICK AND MORTAR SHALL RECEIVE A 1/2" MORTAR PARGE COAT ON INSIDE AND OUTSIDE.
10. ALL SPACE BETWEEN PIPE AND OPENING INSIDE OF MANHOLE TO BE GROUTED WITH TYPE S MORTAR.
11. SEWER MAIN PENETRATIONS AND/OR SERVICE LATERAL PENETRATIONS ENTERING AT 30" OR LESS ABOVE THE MANHOLE BENCH SHALL HAVE A SLIDE CONSTRUCTED OF BRICK AND MORTAR (SEE DETAIL).
12. ALL PENETRATIONS ENTERING MANHOLE AT GREATER THAN 30" SHALL BE AN INSIDE DROP MANHOLE (SEE DETAIL).
13. INSIDE DROP MANHOLES, AND PUMP STATION RECEIVING MANHOLES SHALL BE MINIMUM 5' DIAMETER MANHOLES.
14. SANITARY SEWER MANHOLES SHALL BE COATED WITH COAL TAR EPOXY 20 MILS THROUGHOUT THE INSIDE OF THE MANHOLE.
15. ALL MANHOLES SHALL HAVE A SEWER GUARD INSERT INSTALLED - PLASTIC IS ALLOWED IN NON-TRAFFIC AREAS - STAINLESS STEEL INSERT PANS ARE REQUIRED IN TRAFFIC AREAS
16. MANHOLES SHALL BE TRAFFIC BEARING WITH A MINIMUM HS-20 LOAD ALLOWANCE.

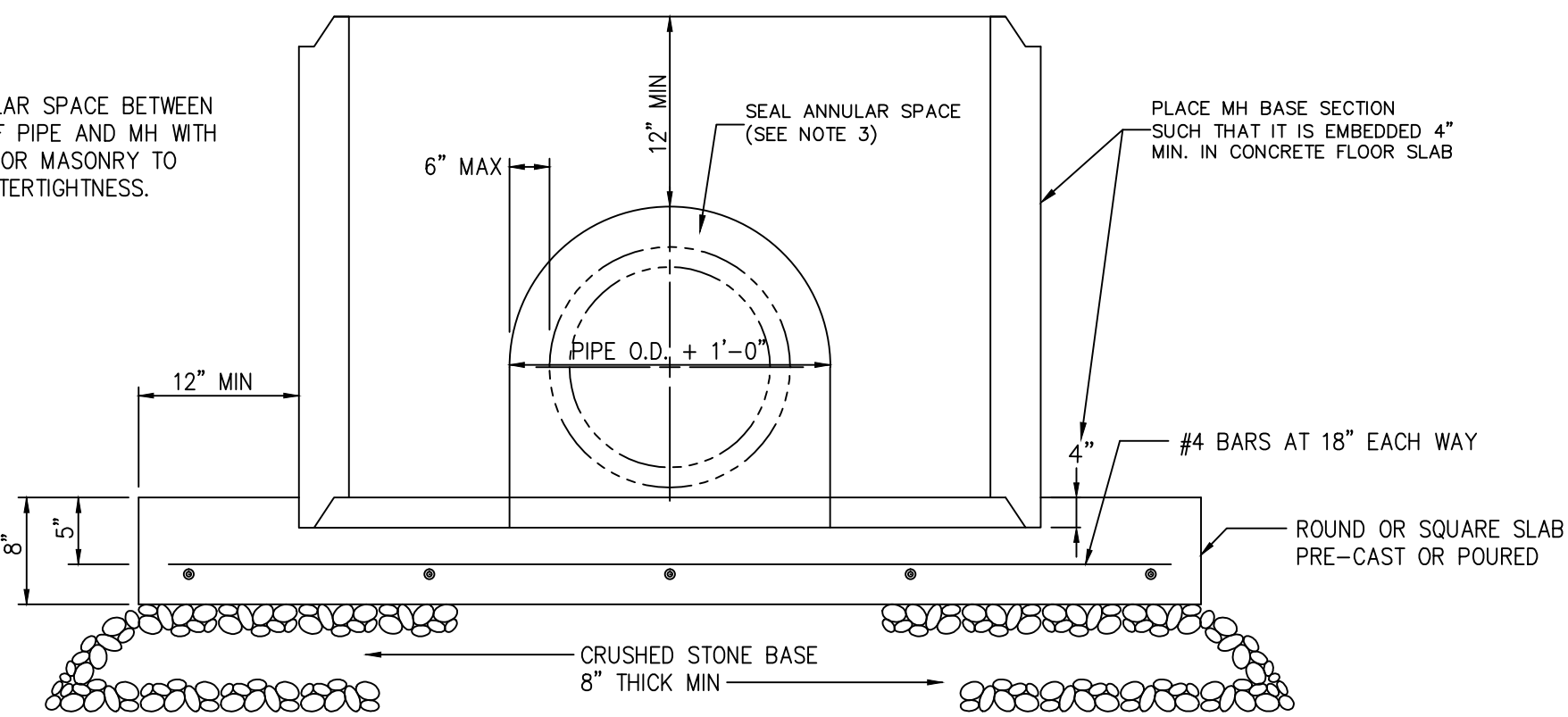


PRECAST CONCRETE MANHOLE
DETAIL S-1

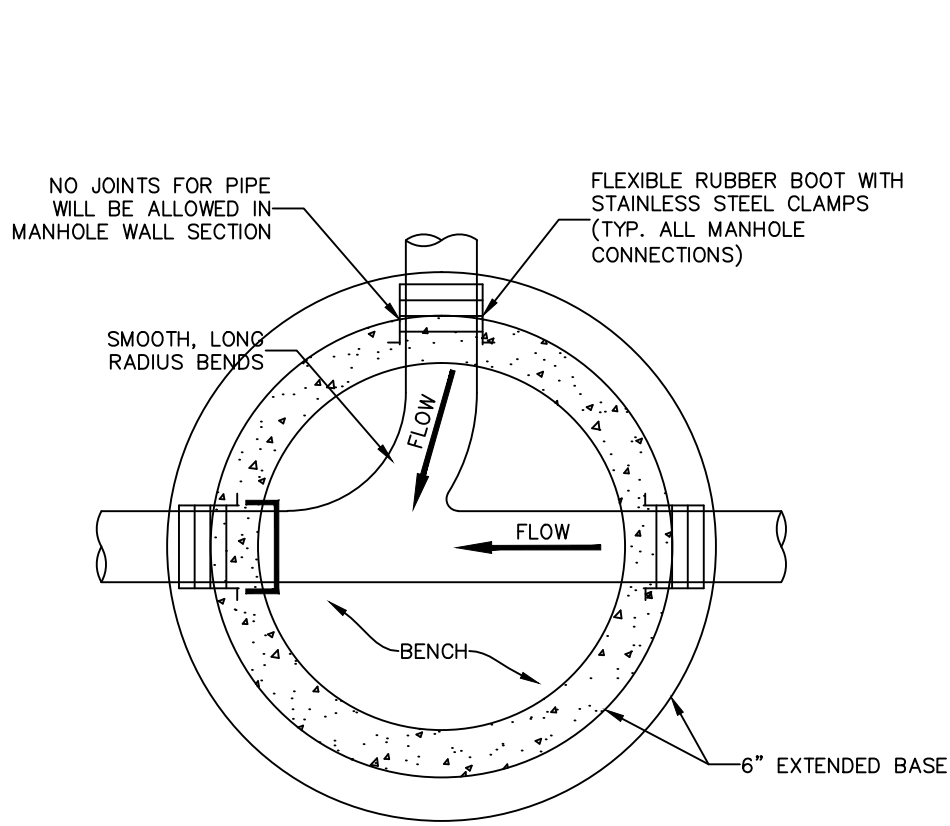


- NOTES:
1. FLOW SHALL BE MAINTAINED DURING CONSTRUCTION.
 2. THIS DETAIL TO BE USED WHEN A NEW 6" OR LARGER LATERAL OR MAIN NECESSITATES CONSTRUCTION OF A NEW MANHOLE.
 3. ANNULAR SPACE BETWEEN PIPE AND MANHOLE MUST BE SEALED WITH BRICK AND MORTAR TO PREVENT INFILTRATION.

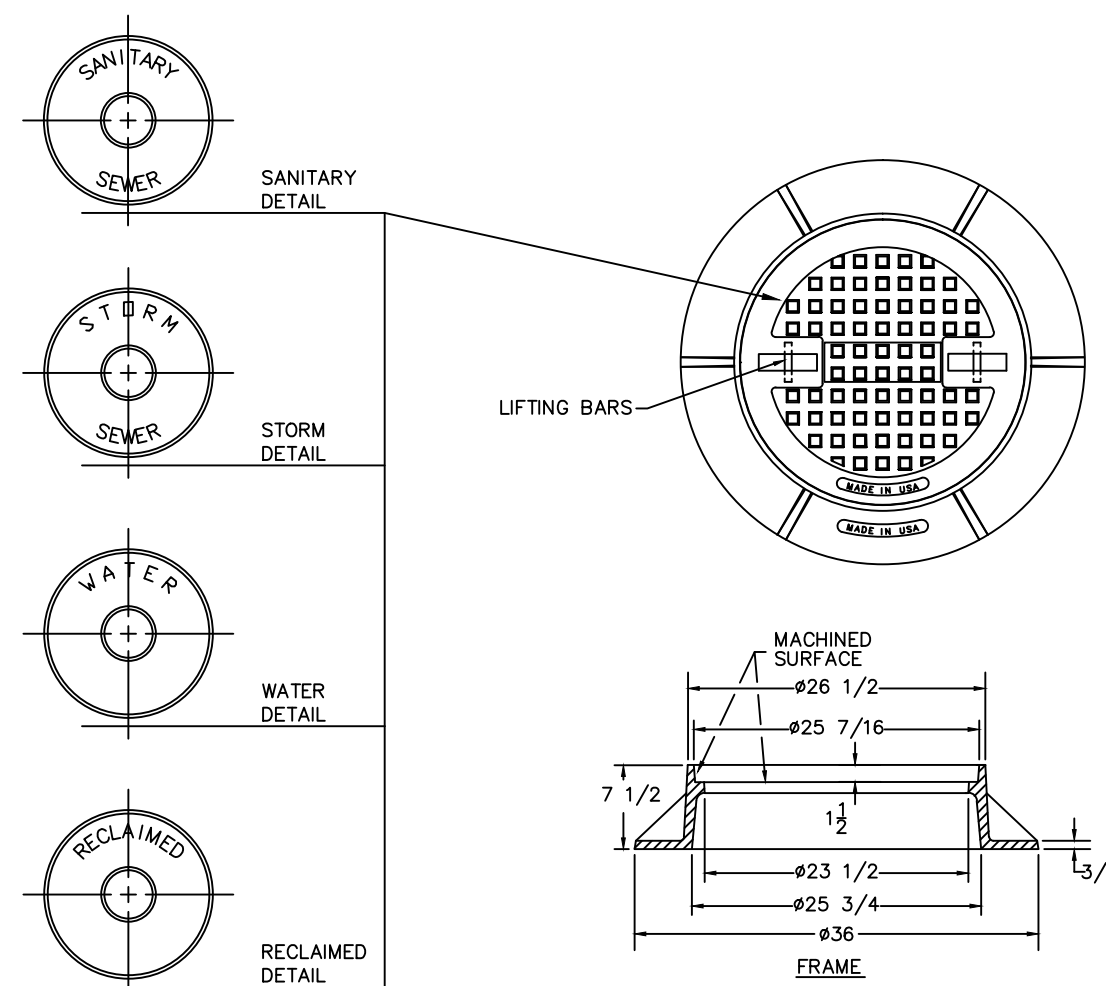
NOTE: FILL ANNULAR SPACE BETWEEN OUTSIDE OF PIPE AND MH WITH CONCRETE OR MASONRY TO INSURE WATERTIGHTNESS.



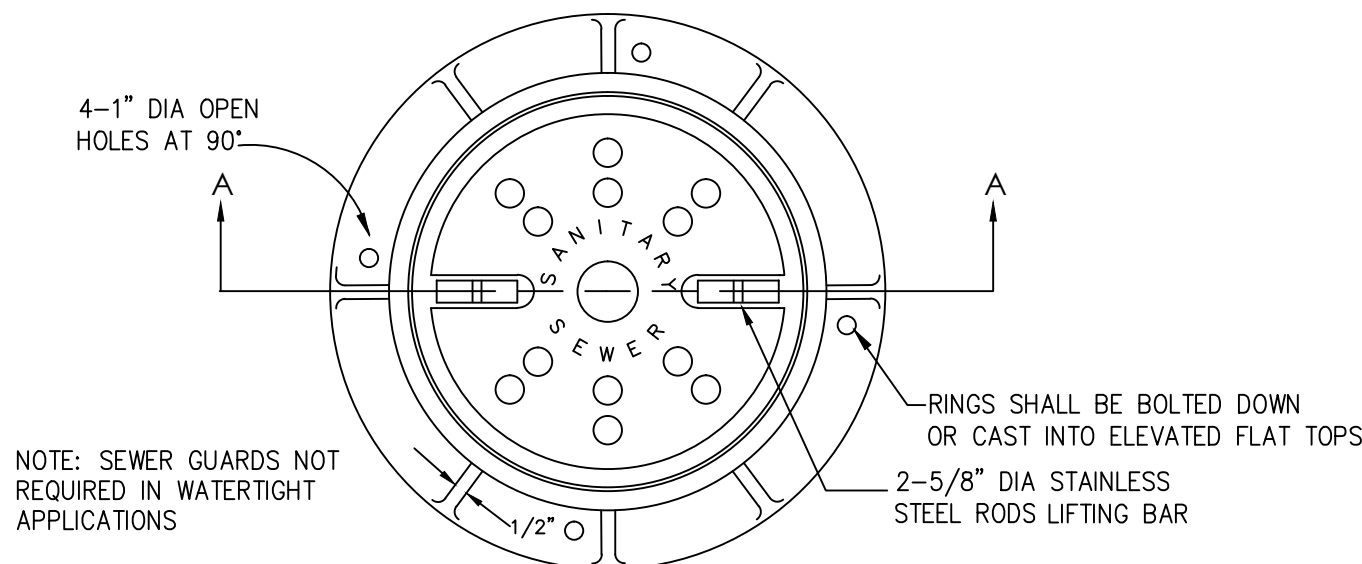
PRECAST CONCRETE DOGHOUSE MANHOLE
DETAIL S-4



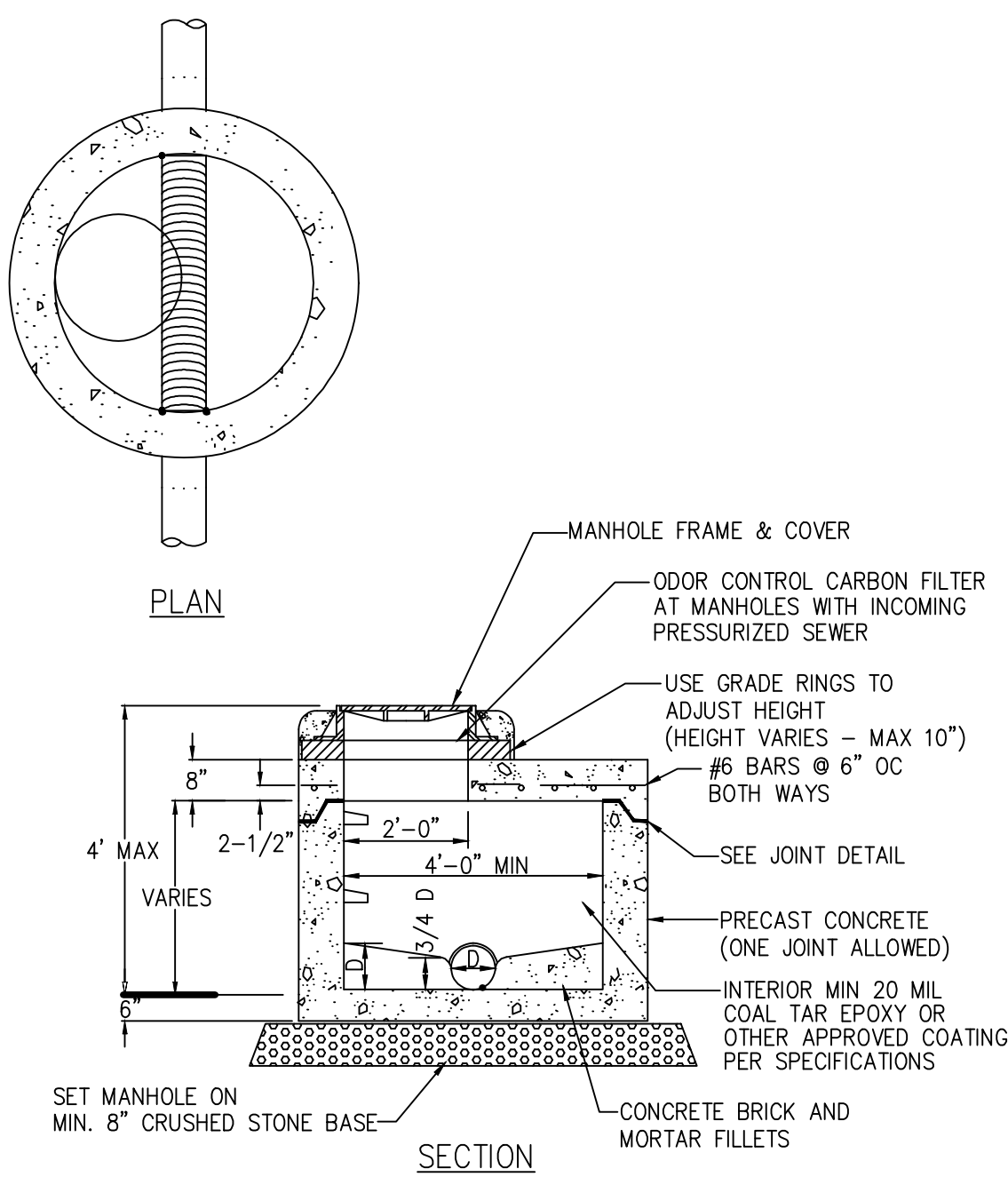
SECTION A-A



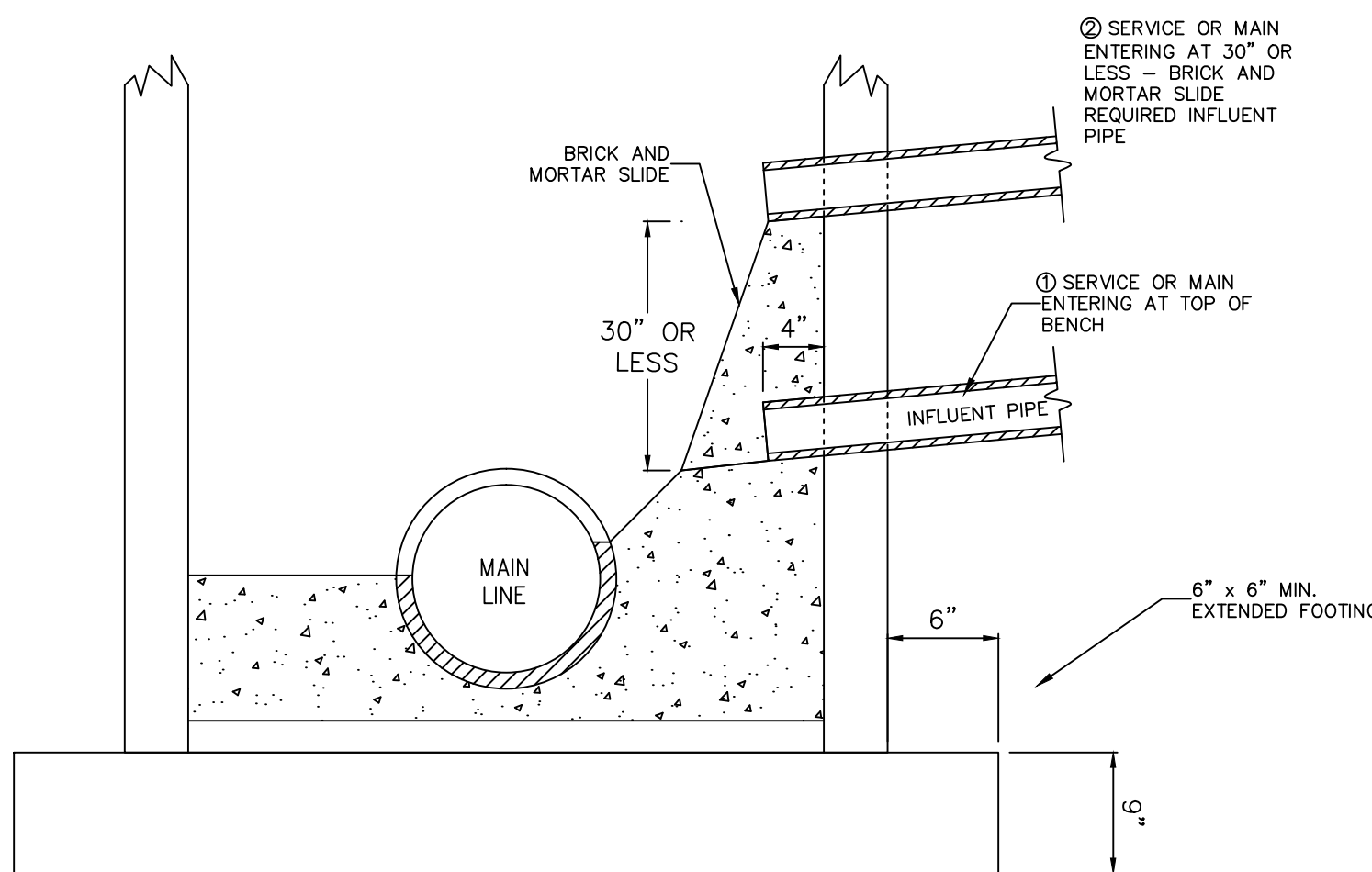
STANDARD MANHOLE RING AND COVER
DETAIL S-2



WATERTIGHT MANHOLE RING AND COVER
DETAIL S-3



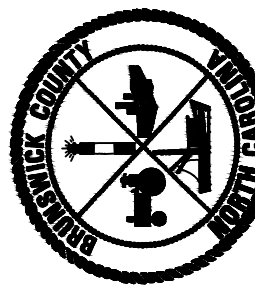
SHALLOW PRECAST CONCRETE
MANHOLE WITH FLAT TOP
DETAIL S-5



CROSS SECTION AT EXISTING MANHOLE
MAINS OR SERVICES ENTERING MANHOLE
DETAIL S-6

Revisions	
1.1 - DATED 4/30/2013	Mod. S-4, S-6, Rem. S-4A

COUNTY OF BRUNSWICK



GENERAL SEWER DETAILS
FOR

BRUNSWICK COUNTY
NORTH CAROLINA

Date:	06-14-12
Scale:	NTS
Drawn By:	JDM
Checked By:	WLP